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September 12, 1997

Mr. Marc Cummings
Illinois Environmental Protection Agency
Bureau of Land
Voluntary Site Remediation Unit
Remedial Project Management Section
Division of Remediation Management
2000 Churchill Road
P.O. Box 19276
Springfield, Illinois 62794-9276

RE: Responses to Comments on the Revised
Summary Report and Supplemental Work Plan
0316000025-Cook County
Chicago/Interlake Landfill Site
Site Remediation/Technical Reports

Dear Mr. Cummings:

The following are Waste Management of Illinois, Inc.'s, (WMII's) responses to the Illinois Environmental Protection Agency's (IEPA's) comments on WMII's September 1996 Summary Report and Supplemental Work Plan SR-SP (Report), submitted to IEPA on September 23, 1996, and the Revised Tables and Additional Figures, submitted to IEPA on February 6, 1997, provided in your letter dated July 14, 1997.

Comment 1:

- Page 3-1, Section 3.1, Conclusions, first paragraph refers to the detection of benzene in the shallow monitoring wells and the background water well (BG-1) above the Class I Illinois Groundwater Quality Standard with conclusion that since BG-1 also contained benzene above the Class I standard, the resultant detection was due to contaminated sample containers. This reference is apparently to the May 4, 1982 sampling conducted by consultants for Waste Management and included monitoring wells ST-2S and ST-2D in the southwest corner. Since Waste Management is requesting a no further action letter only for the southwest corner, both ST-4S and ST-4D and BG-1 should be resampled to provide more recent data and eliminate the

possibility of benzene being a contaminant of concern. The Illinois EP recommends a minimum of one additional monitoring well be installed directly south of Area B to fully characterize this area within the southwest corner. Any new monitoring wells installed in the southwest corner should be sampled and the samples analyzed for parameters on the target compounds list (TCL).

WMII Response:

The resampling of ST-4S, ST-4D, and BG-1 is included in the Work Plan. WMII agrees that the new monitoring well proposed in the Work Plan should be installed directly downgradient of Area B as determined by the water level measurements that will be taken during the monitoring well inventory and each time the monitoring wells are sampled. IEPA recommends that this new well should be located south of Area B and WMII proposed a location west of Area B. The location of the new monitoring well will be determined in the field (south, southwest, or west of Area B) based on the direction of groundwater flow in this area of the site. The samples from this new well will be analyzed for the TCL as will the samples from all of the other site monitoring wells.

Comment 2:

- Page 3-2, Section 3.2, Recommendations, it is understood that the southwest corner of the Interlake property is to be heretofore referred to as the Site as delineated in Figure 2 of the subject document.

WMII Response:

Comment noted.

Comment 3:

- Page 3-3. Section 3.2.2, Surface Soil Sampling, discusses the proposed collection of surface soil samples to verify if the volatile organic compounds (VOCs) and semi-volatile compounds (SVOCs) previously detected at the Site have degraded to levels below the IEPA's Soil Remediation Objectives. Has it been determined to what depth the proposed soil samples will be collected? Please be advised that based on the information provided, the on-site fill material does not meet the definition of soil. Care should be taken to collect samples in the dense gray clayey sand as indicated in Figure 15 of the 1082 Canonie Report. It may also be desirable to develop a chemical profile of the slag, sand and gravel fill within the boundaries of the Site.

WMII's Response:

WMII agrees that the on-site fill material does not meet the definition of a soil. The dense gray clayey sand referenced by IEPA is located below the water table and also does not represent a

surface soil. Since it is likely, to start, that WMII will be focusing only on obtaining a 4(y) letter for the remediation of the tarry deposit, WMII, at this time, is not proposing to obtain any surface or below-surface soil samples of the dense gray clayey sand, or any other materials, for laboratory analysis. Any surface "soil" samples obtained will be analyzed for the TCL. WMII does not propose to develop a profile of the slag and other fill materials at the site, but to focus on the remediation of the tarry deposit.

Comment 4:

- Develop and submit a map of the Site showing the location of proposed soil samples and test pits to be completed in the vicinity of the tar-pit. The horizontal and vertical extent of the tar-pit must be determined and if not limited to the southwest corner the area enrolled in the Pre-Notice Site Cleanup Program (Program) should be expanded.

WMII Response:

WMII does not propose to do any test pits or soil sampling to define the limits of the tarry deposit other than the confirmation sampling of the sides and bottom of the excavation following the removal of all visual evidence of the tarry material. These samples will be analyzed for the TCL. The horizontal and vertical extent of the tarry deposit will be determined visually during the excavation activities followed by the confirmatory sampling and laboratory analyses of the sides and bottom of the excavation area, similar to a tank removal project. In accordance with this methodology, WMII does not feel that a map of the sampling locations is necessary at this time.

Comment 5:

- Page 3-3, Section 3.2.3, Investigation of "Tar-Like" Materials, sixth sentence, states "One composite sample from the area will be submitted for waste disposal testing (profiling). Please include in the Remediation Action Plan a detailed discussion of the established waste characterization procedures.

WMII Response:

The requested information is attached to this document and includes the WMII Special Waste Management Decision, the IEPA Waste Stream Authorization (Permit) Number 970248, and WMII's internal guidance document on special waste acceptance/approvals.

Comment 6:

- It appears from a review of Figure 2 of the subject report the southwest lagoon discharges to a ditch on the west edge of the Site, which eventually connects to Lake Calumet. If any contaminants in the southwest lagoon are discharges to the off-site ditch and contributes contamination of Lake Calumet, Waste Management may be

responsible for clean up of the discharge. The receive an NFR, the Illinois EPA recommends Waste Management sample the surface water and sediment at the southwest lagoon discharge point to determine, if possible, whether contaminants generated on-site are contributing to the degradation of the ditch and subsequently Lake Calumet.

WMII Response:

At this time, WMII is only concentrating on the issues revolving around the tarry deposit at the site and receiving a 4 (y) release letter for its remediation. The issue discussed in the comment may be addressed at a later time by WMII if WMII elects to pursue an NFR for a larger portion of the Site.

Comment 7:

- Page 1, response #1, states: "Based upon the meeting between IEPA and WMII on August 22, 1996, WMII has decided that future investigation and potential remediation activities to be conducted by WMII will be focused on the southwest portion of the property, and will exclude surface water, sediment, and regional groundwater concerns. WMII intends to pursue a No Further Action (NFA) letter from the Illinois EPA only with respect to remediation of the southwestern portion of the property delineated in Figure 2 of the Report."

  Waste Management's election to limit remediation activities to the southwest corner of the above referenced Site appears to convey the intent to conduct a focused investigation and remediation as presented in accordance with Section 740.430 of 35 Ill. Adm. Code, Part 740. The types of release available under the December 15, 1995 Environmental Protection Act ("Act") are either a 4(y) or "No Further Remediation" letters. the 4(y) release letter is provided to participants enrolled in the former Program or the newly created Site Remediation Program (SRP). On the other hand a participant in the SRP may also receive a "N Further Remediation" (NFR) letter under SRP.

  The NFR, unlike a 4(y), releases the owner/operator from a liability applied to both the property and the action of remediation instead of the action along as under Section 4(y). The Illinois EPA recommends Waste Management review Section 740.210(a)(5) of Part 740 and notify the Illinois EPA if it wants to participate in the SRP to receive an NFR letter. However, it will not be possible for Waste Management or receive an NFR for the southwest corner as indicated on Figure 2 without investigating all exposure routes as presented in 35 Ill. Adm. Code, Part 742. If Waste Management intends to proceed with the focused investigation, to not include the surface water and sediments in the southwest corner, the only release available will be under Section 4(y).

WMII Response:

Comment noted. WMII will, at this time, only be seeking a 4(y) release letter for the remediation of the tarry deposit. If WMII elects, at some later date, to pursue an NFR for a larger portion of the site, we will make that decision known to IEPA at that time.

Comment 8:

- Page 1, second and third sentence to response #3, state: "Duwal (1989, Appendix E) calculated an in-situ hydraulic conductivity or 5.9×10^{-4} from a fall head test done on groundwater monitoring well MW-2 installed in the glacial till at the site. Although well yields were not specifically reported in either investigation, the well yields corresponding to hydraulic conductivity values in this range are anticipated to be low." While these statements may be proved true with actual field measurements, anticipations cannot be substantiated. The yield should be measured for each well and reported. In addition, if MW-2 is not on-site, the calculated hydraulic conductivity and measured or even anticipated yield rates may not be applicable to the Site.

WMII Response:

Comment noted. WMII does not, at this time, plan to perform formal well yield or pumping tests on the site monitoring wells. However, WMII will report the results of the well inventory and any possibly needed well redevelopment, as well as purge information and the results of any slug testing data collected during the monitoring well sampling events, to IEPA. This data will provide at least qualitative information on the yield of the wells, and, in some cases, may provide quantitative information as well.

Comment 9:

- Page 2, response #4, states in part: "The rate of flow of the groundwater was not reported for the unexcavated sands and fill in the Canonie (1982) or the Duwal (1989) reports, however, Duwal states that "the velocity of the groundwater flow is usually very slow, on the order of less than a meter per day." Duwal also describes the possibility that the heterogeneous nature of the fill may provide conditions for preferential flow paths in the fill where the flow velocity is higher."...On what are these conclusions based? Unless the velocity of any flow is measured, no one can make a categorical statement that groundwater or surface water flow slow or fast with any credibility. The velocity must be measured.

WMII Response:

The conclusions of Mr. Duwal's Master's thesis are based on his own investigations and field observations and measurements. Since Mr. Duwal did not perform this work for WMII, we have no additional information on Mr. Duwal's work or the conclusions of his thesis, other than the

document itself. From WMII's review of the thesis, it appears that Mr. Duwal's conclusions are well supported by his data. It is impossible to measure groundwater flow velocity directly. What is measured is the hydraulic conductivity of the soils or "aquifer" as provided by a pump test or slug test. The hydraulic gradient information is provided by water level measurements. Together, this information is then used to calculate the groundwater flow velocity. The site water level information obtained during the well inventory, and during each of the sampling events, along with the results of slug tests on some of the monitoring wells, will enable WMII to calculate groundwater flow velocities for those locations.

Comment 10:

- Page 4, second sentence and following, response #13, states: "However, a modification to the test describes a 20 times dilution factor of total metals analytical results which is inherent in the TCLP procedure (the soil is leached with 2 liters of liquid). Assuming complete leaching occurs during the TCLP procedure so that all of the contaminant in the solid leaches into the liquid, the solid concentration will be diluted by a factor of 20 in the resulting liquid. Incomplete leaching would result only in a lower concentration in the liquid. Therefore, it is logical to assume that TCLP results would be lower than the concentration of total metals in the soil and sediment." While the reported total metals appear to be low and theoretically your assumptions may be correct, only actual TCLP results are acceptable. With regard to not sampling surface water and sediments again, since Waste Management wishes to compete a focused soil and groundwater investigation, the only release available will be for an action under Section(y) of the "Act".

WMII Response:

Comment noted.

Comment 11:

- Page 5, response #14, "The text has been edited to indicate that biodegradation may have been lowered these SVOC concentrations over the last 6 years to levels which may no longer exceed regulatory threshold values." Will future soil and groundwater sampling include SVOC analysis?

WMII Response:

Yes, as provided in Table 6, the future groundwater (and soils) samples obtained from the Site will be analyzed for the TCL parameters which include SVOCs.

Comment 12:

- Pages 5 and 6, response #16 states: "The reference to an oil slag sample with elevated levels of benzene is from Integrated Sites, 1991 Work Plan. A TCLP analysis of white material collected form one test pit in Area "A" in 1991 resulted in a benzene concentration of 2.8 mg/l which is above the soil cleanup standard of 0.5 mg/l." While this is a correct comparison of values, the material comparison is not correct. A slag is not a soil. the regulatory limit for benzene is 0.5 mg/l and may be found in 35 Ill. Adm. Code, Part 700, Section 721. The Illinois EPA recommends Waste Management characterize the slag as a potential waste.

WMII Response:

At this time, WMII will not be pursuing a 4(y) release for the slag found on the Interlake Property. For further general information on the slag found in the area of the Site (the Lake Calumet Area and the Southeast Side of the City of Chicago), and the geochemistry of the weathering of the slag, please review the attached information that was provided to WMII by George Roadcap of the Illinois State Water Survey (ISWS).

Comment 13:

- Page 2, second paragraph, second and third sentences, state: "Due to the 1:20 dilution factor applied in TCLP analyses, the higher TCLP concentrations that would be expected for these same samples would be approximately five percent (1/20) of these total metals results. This conservative conclusion assumes that 100% of the total metals detected would be leachable and extractable using TCLP extraction procedures." While theory is generally found in text books, program decision pints are based on actual data. The Illinois EPA recommends, Waste Management collect soil data analyzing for total metals and based upon the highest derived totals, conduct selected TCLP analyses.

WMII Response:

Comment noted. WMII agrees that soil samples obtained for metals should first be analyzed for their total metals concentrations, and then the samples with the highest total metals concentrations should be selected and reanalyzed using the TCLP procedures.

As requested, WMII will give IEPA at least 14 days notification prior to the start of any onsite investigatory or remedial activities. WMII has tentatively planned the remediation of the tarry deposit for some time during the week of September 28 through October 4, 1997. I will contact you by phone with the exact date when it has been set. Also, as requested, two copies of all future documents regarding the Site will be submitted to IEPA.

Please call me at (708) 409-3594 if you have any questions regarding this submittal, or require any additional information.

Sincerely,

Waste Management of Illinois, Inc.

Mark J. Leibrock, P.E.
Project Manager - Closed Sites

MJL:js

cc: Larry Schmitt, USEPA
Mike Prattke, WMI
Katie Moertl, WMI
Keith Bandt, Rust

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